

Sep-07

Topic Area 1: Energy Efficiency

Title	Description	Goal	Measurable Impact/Outcome	Existing or New (short or long term)	Responsible Office	Lead Contact	Partners/Stakeholders	Comments
Short Term	Ramp up EPA's Regional outreach to encourage energy efficiency in more homes, cities, businesses and industry							
2007 Earth Day Pledge	Citizens were asked to pledge to practice various energy efficiency measures at home.	To educate citizens about energy efficiency measures at home.	Distributed to over 2000 citizens.	Short term	OCPI	Wendy Dew	NWF, 9News Live Green, Alliance for Sustainable Colorado	Highly successful-received numerous online pledges. Would repeat next year. Basis for future online commitments and factsheets.
Colorado Energy Office Change a Light School Initiative	EPA will work with the State Energy Office to bring the Change a Light Campaign in to Colorado Schools.	To educate kids and parents about energy efficiency.	Colorado statewide with Change a Light Pledges.	Long term	OCPI/O PRA	Wendy Dew/Patty Crow	CO State Energy Office	
EPA Climate Change/Sustainability Education Outreach	Utilizes existing EPA Climate Change educational resources to make available to R8 schools Climate Change Toolkits and factsheets.	To educate kids and teachers about Climate Change and Sustainability.	Number of toolkits distributed.	Long term	OCPI	Wendy Dew		There has been a strong demand for these types of outreach materials. I would like to see them updated and reprinted.
Channel 9 News Live Green Program	Assisted Channel 9 News in creating Live Green Program and website.	To educate general public about energy efficiency and sustainability.	Number of hits on website/ number of programming spots created.	Long term	OCPI	Wendy Dew	9 News	Very successful, being picked up by other national affiliates
Performance Track Program	Facilities join his elite EPA program by having an EMS and pledging environmental improvements - many choose energy efficiency projects.	Achieve GHG reductions above those in a business as usual scenario.				Mary Byrne	Any facility in R8 - private, government, NGO, etc.	22 R8 facilities are current members
Energy Star Program	Energy Star programs address energy efficiency for buildings of various kinds, certain industrial facilities, new and existing homes and certain kinds of appliances and equipment.	Reduce greenhouse gas emissions through energy efficiency.	Reductions in CO2 equivalent emissions.	Existing	OPRA - P3T	Patty Crow	Building owners & managers, homebuilders & remodelers, state & local energy offices and related trade associations	Numerous tools and resources are available. See www.energystar.gov
Energy Efficiency via Brownfields Grants	Use criteria in Brownfields grants to encourage activities such as design of Energy Star buildings, transit oriented development, utilization of existing infrastructure.	Greener redevelopment projects on Brownfields properties.	Vary by project	Existing/nea r term	8EPR-SA	Dan Heffernan		
Educate Region 8 Staff and partners on Consequences of Climate Change	Conduct seminar series with experts on the various impacts of climate change.	Develop better understanding of future impacts.	Measures under development	New	8EPR-EP	Brian Caruso/Patti Tyler	R8 Science Council, Regional Staff, Partnering Agencies (NOAA, NCAR, etc)	
2008 Byproducts Beneficial Use Summit – Denver, CO	Region 8 and the USDA's Agricultural Research Service will host the next Byproducts Beneficial Use Summit in the spring of 2008. The summit is designed to exchange information about beneficial use and industrial materials recycling, and provide a forum for the exchange of ideas between regulators and industry.	Provide a method of information exchange on beneficial use/industrial materials recycling, as well as networking opportunities for collaborative partnerships.	Accomplishments for the summit will be tracked and documented.	Short term	SHWP	Kendra Morrison	USDA Agricultural Research Service, WasteNews, U.S. EPA offices, EPA regions, states, Colorado Department of Transportation, Federal Highway Administration, American Coal Ash Association, Industrial Resources Council, other industries and end-users	

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The Greening of Red Rocks Amphitheatre	Region 8 provided an RCC grant to the City and County of Denver to assess the Red Rocks Amphitheatre waste stream, implement a recycling program and work with vendors to minimize incoming waste and hazardous materials, and evaluate the feasibility of establishing a composting program for organic waste.	To implement waste reduction and recycling strategies to meet an initial diversion goal of 30%, and a long-term goal of zero waste.	1. Tons and percent of waste diverted 2. Landfill space conserved 3. Resources conserved 4. Energy savings 5. Number of vendor products changed 6. Survey of Red Rocks attendees about ease of use and attitude 7. Number of additional partners	short term	SHWP	Anne-Marie Patrie, Kim Bartels	City and County of Denver (their partners: Division of Theatres and Arenas, Mayor's Office of Sustainability, Colorado Association for Recycling, Friends of Red Rocks)	
Oil and Gas Sector Interaction	Continue to promote engine performance optimization reviews at Gas Plants and Compressor Stations	Utilize interaction to reevaluate engine use during life cycle of gas field.	Higher energy efficiency	Existing/short term	ECEJ	Hestmark	Region 8 States, New Mexico, Region 6	
Short Term	Increase energy efficiency and conservation through improved materials management							
Recycling Programs (including WasteWise & Federal Electronics Challenge)	Increase energy efficiency through increased recycling and use of recycled products; increase energy and materials efficiency through better management of purchasing, use and end of life disposition of computers and other electronic equipment.	Reduce greenhouse gas and toxic emissions through better management of recyclable materials and purchasing recycled products.	Reductions in CO2 equivalent emissions and emissions/releases of toxic materials.	Existing	OPRA-P3T	Anne-Marie Patrie (Waste Wise), Kim Bartels (Federal Electronics Challenge)	Government agencies & businesses.	See: http://www.epa.gov/wastewise/ and http://www.federalelectronicchallenge.net/
Alternative Materials Use in Roadway Applications	Region 8 provided an RCC grant to the Colorado Department of Transportation's (CDOT) Sustainability Program to conduct a study and complete a review of available engineering evaluations and roadway projects where alternative materials have been successfully used in Colorado and nationwide. Results of the study will provide a knowledge base for DOT and other construction engineers; recommend specification changes to accommodate the reuse of solid waste materials in roadway applications; and promote flexibility in materials reuse for roadway projects.	1. Reduce energy consumption, truck exhaust air pollution, traffic impacts, and noise from reduced offsite hauling of project-generated materials 2. Consume more locally-available urban waste materials suitable for engineering purposes versus those imported from distant quarries 3. Preserve natural resources 4. Conserve landfill space 5. Reduce project costs through waste minimization including offsite hauling, tipping fees at landfills, and reduced native material purchases 6. Improve short- and/or long-term performance of highway features	1. Number of roadway specifications that can be modified to allow an expanded role for alternative materials usage 2. 10% increase in the weight (tons/year) of alternative materials usage as reported in the Recycled Materials Resource Center survey form 3. Reduction in landfill volumes of materials from roadway projects 4. Documentation of material cost savings where alternative materials are employed	Short term	SHWP	Kendra Morrison	CDOT	
Medium Term	Bring greater environmental results and accountability to Green Building							

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Libby, Montana Woodstove Changeout	Beginning in 2006, the United States Environmental Protection Agency (EPA), working with the Lincoln County Department of Environmental Health (Lincoln County), the Hearth Patio and Barbecue Association (HPBA), and the State of Montana, implemented the Libby, Montana Woodstove Changeout Program (Phase II), with a goal of improving air quality for Libby, Montana and the Greater Libby Valley.	The focus of the project was to change out uncertified cordwood stoves being used in households with new, EPA certified woodburning stoves.	The woodstove changeout was implemented through use of a voucher system to change out the uncertified wood-burning appliances in Libby with newer, more efficient wood, pellet, propane, oil or electric heating devices. Over 1000 stoves were changed out through this program. Information is being gathered on the estimated reduction in cordwood usage as well as the PM2.5 reductions in the valley. Reduction in amount of wood used, reduction in woodstove emissions, including GHGs, improved air quality in Libby valley	Changeout of stoves is nearing conclusion, impacts will be long term	OPRA Air and Radiation Program	Catherine Roberts	OAQPS; Montana Department of Environmental Quality; Lincoln County Department of Environmental Health; Hearth, Patio, & Barbecue Association	
Green Roof Design Standards	Include research from EPA's green roof as the baseline for evaluating the effectiveness of green roofs as a stormwater Best Management Practice (BMP).	To get criteria into Denver's design manual for stormwater BMPs. This will provide engineers with guidelines for green roof design and will make green roofs acceptable as a legally required practice throughout the Intermountain West.	Reduces global warming by reducing the urban heat island effect, reduces carbon inputs necessary for building cooling, and effects carbon flux through photosynthesis.	Existing project - 5-10 year time frame	8P-WWW	Greg Davis	Alliance for Sustainable Colorado, EPA ORD, Denver Urban Drainage and Flood Control District, Colorado State University	Interest in the project is very high, and numerous developers are committed to making green roofs the standard stormwater BMP in Colorado.
Green Venues	Greening of two major Denver venues: Union Station and Pepsi Center	Partner with City of Denver and Kroenke Sports Enterprises to achieve GHG reductions via Pepsi Center and Union Station participation in EPA Climate Leaders, WasteWise and ENERGY STAR programs.	To be established via commitments made under various EPA voluntary programs.	Existing/near to mid-term	8P-HW	Ron Lillich	City of Denver and Kroenke Sports Enterprises	
Medium Term	Promote consideration of energy-efficiency in strategies and plans that states are currently developing							
Consolidate State Energy Efficiency Activities in PPAs	Several States in R8 are developing Climate Change Plans and promoting alternative fuels.						R8 States	This will be done in the FY 2009 plans.
Partnerships for Establishing a Sustainable Urban Materials Use Policy	This project has organized area industries and agencies, the City of Denver, and EPA Region 8 to identify ways the City can decrease its greenhouse gas emissions, couple both waste energy and material streams with end uses, and develop innovative technologies that match waste streams with beneficial end uses.	1. Conduct state-of-the-art greenhouse gas inventory for the City of Denver to provide baseline data on which to focus Denver's Climate Action Plan for the U.S. Mayors Climate Protection Agreement 2. Incorporate fly ash from local fossil fuel burning power plants into high volume fly ash concrete ("high performance green concrete" or HPGC) 3. Reprocess used engine oil from local trucking operations into a usable industrial waste energy. City of Denver's goal is to reduce per capita greenhouse gas emissions by 10% by the year 2011 from the per capita baseline of 1990.	1. % waste material reused 2. % waste energy reused or recovered 3. Tons CO2 reductions per year with policy change implementation 4. Equivalent # of cars displaced from roads from recycling materials 5. % participation of area industries 6. # of green concrete products put into the field 7. Revenues generated or saved 8. # of restrictive building codes petitioned 9. Tons GHG savings 10. Durability, performance, and life-cycle costs for HPGC	Medium term	SHWP	Kendra Morrison	University of Colorado at Denver and Health Sciences Center (and their partners: City and County of Denver Public Works and Environmental Health, City of Denver Mayor's Office of Sustainability, American Coal Ash Association, Recycled Materials Company, Colorado Department of Transportation, City of Denver Department of Environment, cement and ready-mix industry representatives)	

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Long Term	Promote water efficiency and energy efficiency in the water, wastewater and energy utility sectors							
Sustainable Infrastructure Initiative	Develop SI strategy and conduct SI workshops for stakeholders.	The SI Initiative will serve as a framework to build awareness and motivation for water utilities to engage on climate issues while achieving water and energy efficiency goals through four principle avenues: reduce future infrastructure needs and costs, manage infrastructure more effectively, improve program coordination and better target available resources.	Under development	New (long term)	OPRA-WE	Elaine Lai	Multiple; municipal water/ww utilities, tribes, American Water Works Association, NCAR, Private Sector	
Other								